

Applic. No. 10/012,217
Art Unit: 2874

AMENDMENTS TO THE CLAIMS:

Claim 1. (Currently Amended) An optical interface assembly for interfacing a fiber optical connector to an optoelectronic device, said assembly comprising a retainer unit, the retainer unit including:

(i) a rectangular opening for receiving a fiber stub array, the opening and fiber stub array each having a sloping side wall, wherein the slope of the side wall of the opening is substantially the same as the slope of the side wall of the fiber stub array, and

(ii) a wedge well for receiving a wedge such that when the fiber stub array is placed in the retainer unit and a wedge is inserted into the wedge well, the sloping side walls of the opening and fiber stub array are mated together and ~~having a well for receiving a wedge and a sloping side wall that abuts a fiber stub array when the fiber stub array comes in contact with the wedge, thereby fixing the fiber stub array in position.~~

Claim 2. (Currently Amended) The interface assembly of claim 1, further comprising a two part plate assembly with provision for accepting an optoelectronic device, said two part plate assembly is being mechanically coupled to said retainer by at least one of welding and applying epoxy.

Claim 3. (Original) The interface assembly of claim 1, further comprising a two part plate assembly and a connector latch, said two part plate assembly and said connector latch mechanically coupled to either side of the retainer.

Claim 4. (Original) The interface assembly of claim 1, wherein the retainer includes a notch along a base, and wherein said notch is configured to fix the fiber stub array in the axial direction.

Claim 5. (Original) The interface assembly of claim 1, wherein the fiber stub array includes a plurality of passageways and at least one guide bore, said passageways and said guide bore are axially aligned to IEC 1754-5 standard.

Applic. No. 10/012,217
Art Unit: 2874

Claim 6. (Currently Amended) The interface assembly of claim 1, wherein the fiber stub array includes a well for relieving excess epoxy, a sloping front face for mating with the conventional connector, and a sloping rear face ~~of~~ for wire bonding.

Claim 7. (Original) The interface assembly of claim 1, further including register means and a latch means for locating a conventional connector latch with respect to the retainer and for coupling the latch and the retainer.

Claim 8. (Original) The interface assembly of claim 1, wherein the fiber stub array is made of a first member and a second member and wherein the first and second members have keying features for alignment.

Claim 9. (Original) The interface assembly of claim 1, wherein the retainer is welded to a VCSEL plate assembly.

Claim 10. (Original) The interface assembly of claim 1, further comprising a plurality of V-grooves axially disposed within the fiber stub array.

Claim 11. (Original) The interface assembly of claim 1, further comprising a VCSEL plate assembly having a VCSEL array and a photodiode mounted thereon, wherein the VCSEL plate assembly is mechanically coupled to the retainer.

Claim 12. (Currently Amended) An optical interface connector for connecting a ferrule to an optoelectronic device comprising a base unit, optoelectronic plate, fiber stub array, and connector latch,

~~in mechanically engagement with a connector latch, and~~ said connector latch having detents and keying features for coupling the connector latch to the base unit,

said base unit ~~comprises~~ comprising at least one guide pin passing through a ~~series of components, said components including an~~ the optoelectronic plate and a fiber stub array; and

Applic. No. 10/012,217
Art Unit: 2874

wherein said optoelectronic plate includes at least one alignment hole in a loose fit engagement with the at least one guide pin to thereby permit said optoelectronic plate to move in at least one of x, y and theta direction with respect to said base unit.

Claim 13. (Currently Amended) The interface connector of claim 12, wherein the optoelectronic plate comprises a first weld plate and a second ceramic substrate, and wherein the first plate is coupled to the base unit by welding.

Claim 14. (Original) The interface connector of claim 12, further including a VCSEL array and a photodiode in passive alignment with the optoelectronic plate.

Claim 15. (Original) The interface connector of claim 12, wherein the fiber stub array is made of a first member and a second member and wherein the first and second members have keying features for alignment.

Claim 16. (Original) The interface connector of claim 12, wherein the optoelectronic plate includes a ledge for registration between a first plate portion and a second plate portion.

Claim 17. (Original) The interface connector claim 12, wherein the optoelectronic plate is welded to the base unit after the optoelectronic plate has been actively aligned with a conventional connector.

Claim 18. (Original) The interface connector of claim 12, wherein the connector latch is configured to accept a conventional ferrule and wherein the ferrule is configured to push the fiber stub array from a first position to a second position towards the base unit as the ferrule is received by the connector latch.

Claim 19. (Original) The interface connector of claim 12, further comprising a second guide pin for registering the components along approximately a single plane.

Applic. No. 10/012,217
Art Unit: 2874

Claim 20. (Original) The interface connector of claim 12, further comprising a plurality of V-grooves axially disposed within the fiber stub array.

Claim 21. (Canceled)

Claim 22. (Canceled)

Claim 23. (Canceled)

Claim 24. (Canceled)

Claim 25. (Canceled)

Claim 26. (Canceled)

Claim 27. (Canceled)

Claim 28. (Canceled)

Claim 29. (Canceled)

Claim 30. (Canceled)

Claim 31. (Canceled)

Claim 32. (Canceled)

Claim 33. (Canceled)

Claim 34. (Currently Amended) An optical interface unit for coupling an optoelectronic device to a fiber connector, said interface unit comprising a cradle unit, a fiber stub array,

Applic. No. 10/012,217
Art Unit: 2874

a VCSEL plate assembly, and a connector latch; said cradle unit including a lower and upper cradle member, said lower cradle member having a generally U-shaped configuration so that the cradle unit is configured to encase said fiber stub array and to fix an alignment gap between said fiber stub array and said VCSEL plate assembly; said VCSEL plate is configured to accept a VCSEL array and to permit signals from said VCSEL array to pass to a photodiode, which is mounted sub-adjacent to the VCSEL array; said connector latch is configured to couple to said cradle by at least one of epoxy detents, and restriction from a screw; and wherein said cradle is attached to said VCSEL plate assembly by at least one of welding and applying epoxy.

Claim 35. (Original) The interface unit of claim 34, including a wedge and a wedge hole for limiting the fiber stub array from moving laterally.

Claim 36. (Original) The interface unit of claim 34, wherein the cradle includes a cavity having four sides and wherein one of the sides has a slope.

Claim 37. (Original) The interface unit of claim 34, wherein the cradle includes a notch and a guide for limiting the fiber stub array from moving axially and laterally with respect to the cradle.

Claim 38. (Original) The interface unit of claim 34, further comprising a pair of guide pins fixedly attached to a pair of guide holes on the fiber stub array, said pair of guide pins is configured to guide said conventional connector and to align a plurality of fibers within said conventional connector to a plurality of fibers in said fiber stub array to about less than +/- 1 micron.

Claim 39. (Original) The interface unit of claim 34, wherein said fiber stub array includes an upper portion and a lower portion and further includes a plurality of V-grooves disposed axially on the lower portion.

Claim 40. (Currently Amended) An optical interface device comprising:

Applic. No. 10/012,217
Art Unit: 2874

a plastic fiber stub array housing having a plurality of axial passageways for receiving a plurality of optical fibers, each of said plurality of passageways extending longitudinally from a first optical surface to a second optical surface, and alignment guide holes extending longitudinally from the first optical surface to the second optical surface wherein said axial passageways are precisely aligned with said alignment guide holes;

a cradle unit including a lower and upper cradle member for encasing the plastic fiber stub array housing ~~having an interior cavity~~ and at least one protrusion for keying the plastic fiber stub array housing in at least one direction; and

a connector latch in mechanical communication with the cradle by at least one of epoxy, detents, and pressure from a screw, and wherein the connector latch has an opening for receiving a conventional fiber optic connector.

Claim 41. (Currently Amended) The optical interface device of claim 40, wherein the plastic housing comprises an upper portion ~~ad~~ and a lower portion and wherein the plurality of passageways are disposed along the lower portion.

Claim 42. (Canceled)

Claim 43. (Canceled)

Claim 44. (Canceled)

Claim 45. (Canceled)

Claim 46. (Canceled)

Claim 47. (Canceled)

Claim 48. (Canceled)

Claim 49. (Canceled)

Applic. No. 10/012,217
Art Unit: 2874

Claim 50. (Canceled)

Claim 51. (Canceled)

Claim 52. (Canceled)

Claim 53. (Canceled)

Claim 54. (Canceled)

Claim 55. (Canceled)

Claim 56. (Canceled)

Claim 57. (Canceled)

Claim 58. (Canceled)

Claim 59. (Canceled)

Claim 60. (Canceled)